

Application No. 10/528,298
Amendment Dated: March 2, 2009
Reply to Office Action Dated October 28, 2008

Remarks

Claims 11, 12, and 14-19 are pending.

Claims 11, 12, and 14-19 stand rejected.

Claim 11 has been amended.

Claim 20 has been added

Claims 11-12 and 14-20 are submitted herein for review.

No new matter has been added.

In paragraph 2 of the Office Action, the Examiner has continued the rejection of dependent claim 16 under 35 U.S.C. § 112 because the Examiner has continued the assertion that the term “semiaromatic” renders the claim indefinite. Applicants respectfully disagree.

In the response to arguments section, the Examiner states, “The prefix “semi” renders the claim indefinite because it is not clear what content of aromatic groups would satisfy the claimed limitation, i.e. 1 or 300 aromatic groups.” Applicants note that prefix “semi” from the term “semiaromatic” is used in the art of polymer compositions to denote a polymer that has both aromatic portions as well as aliphatic portions. Regarding the number of aromatic groups needed to satisfy the claimed limitation, it would be one group. The term semi-aromatic does not concern the number of aromatic groups beyond one. A compound would meet the limitation of semi-aromatic if it has at least one aliphatic portion and at least one aromatic portion, regardless of the number of aromatic groups in the aromatic portion.

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In view of this, Applicants respectfully disagree with the Examiner's rejection and request that the rejection of claim 16 under 35 U.S.C. § 112 be withdrawn.

Turning to the substantive rejection, in paragraph 4 of the Office Action, the Examiner has continued the rejection of independent claim 11, under 35 U.S.C. § 102(b) as being anticipated by Robertson (U.S. Patent No. 4,766,194). Applicants respectfully disagree with the Examiner's contentions and submit the following remarks in response.

Independent claim 1, is directed to a process for preparing a self lubricating varnish. Among other elements, it includes carrying out a preparation of a modified diisocyanate in a solvent medium with stirring and heating, so that the heating reacts the isocyanate function group with the terminal functional group.

In sustaining the prior rejection, the Examiner claims in paragraph 14 of the Office Action, that Robertson teaches "...on column 13, lines 24-30 that component "A" is present at a temperature as high as 30°C, which is taken to satisfy the claimed "heating" step. Applicants respectfully disagree.

Applicants note that this heating step, between 20 and 30°C relates with a simple ambient temperature, does not allow a chemical reaction between an isocyanate with another functional group. Hence, this step and the isocyanate obtained therefrom are different from that claimed in claim 11. A temperature which is sufficient to react an isocyanate function group with another functional group is more than 60°C for the most reactive function, and preferably should be more than 80°C. For example, as shown in the present application, the temperature of reaction for the heating step is 100°C for Examples 1 and 3; 150°C for Examples 2 and 4; and 200°C for Examples 5-7.

For at least this reason, Applicants submit that the cited prior art does not teach or

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suggest all of the elements of the prior art as claimed in independent claim 11, and respectfully request that the rejection of this claim be withdrawn. As claims 12 and 14-19 depend from claim 11, Applicants request that the rejection of these claim be withdrawn as well for at least the same reasons.

Applicants have presented new independent claim 20, directed to a process for producing *an enameled electrical conductor* including preparing a modified diisocyanate to which is attached a pendant aliphatic chain containing at least 15 carbon atoms, where the modified diisocyanate is obtained by reacting an isocyanate functional group of a triisocyanate with a terminal functional group of an aliphatic chain. The preparation of the modified diisocyanate is conducted in a solvent medium with stirring and heating.

Thereafter, the modified diisocyanate is mixed with at least one difunctionalized monomer containing two functional groups which are reactive with the isocyanate functional groups of the modified diisocyanate in order to obtain a self lubricating insulating varnish having a modified polymer with a base polymer to which is attached a pendant aliphatic chain containing at least 15 carbon atoms. *An electrical conductor is coated* with a layer of the obtained self-lubricating varnish.

Applicants submit that new claim 20 is directed to a method for preparing an enameled wire as opposed to claim 11 which is more broadly directed to a method for producing a self lubricating varnish.

Applicants respectfully submit that the Robertson reference is not in an analogous field of art with claim 20. For example, the cited Miyake reference is in a similar field of art, namely

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enameled wire construction. On the other hand, Robertson is in the field of enameled bowling ball construction. Although, one of ordinary skill in the art of synthetic resins may have general knowledge of resin applications, there is a large gulf between wire construction and bowling ball manufacturing. Thus, although both relate to resins there are no similarities in structure and function of the inventions as claimed (enameled wires) with the cited reference which deals with bowling ball construction.

Applicants note that Miyake is in the field of analogous art with claim 20 but it does not teach or suggest all of the elements, either alone or with Dunwald et al (U.S. Patent No. 4,281,095).

In particular, the Miyake reference that teaches an enameled wire that involves mixing, *in one step*, the following reactants:

- a. a diisocyanate (“diphenylmethane-4,4’-diisocyanate” – page 15, line 12),
- b. a terminal functional group of an aliphatic chain (“montan wax acid having a chain length of 28 to 32 ” – page 15, lines 14-15), and
- c. one difunctionalized monomer containing two functional groups which are reactive with the isocyanate functional groups of the diisocyanate (“trimellitic anhydride” – page 15, line 13).


In addition to not disclosing a two step process, Miyake’s mixing step does not disclose the use of a triisocyanate. (only a diisocyanate is disclosed in Miyake).

For at least this reason, Applicants submit that the cited prior art does not teach or suggest all of the elements of the prior art as claimed in independent claim 20, and respectfully request that the rejection of the claims not be carried over to this newly added claim

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In view of the foregoing, Applicants respectfully submit that pending claims 11-12 and 14-20 are in condition for allowance, the earliest possible notice of which is earnestly solicited. If the Examiner feels that an interview would facilitate the prosecution of this Application he is invited to contact the undersigned at the number listed below.

Respectfully submitted,
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Dated: 3-2-09